J. ANDRES

1646

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/029,042C

DATE: 01/11/2001
TIME: 11:19:26

Input Set : N:\paola\PTO.txt
Output Set: N:\CRF3\01112001\I029042C.raw

Does Not Comply
Corrected Diskette Needed

```
 4 <110> APPLICANT: Kim, Sun-Young
 5       Kim, Kee-Won
 6       Kim, Tae-Han
 7       Hwang, Jeong-Ho
 8       Kim, Seon-Hee
 9       Lee, Sun-Young
11 <120> TITLE OF INVENTION: Heterologous Protein Production System using Avian Cells
 0 <130> FILE REFERENCE:
13 <140> CURRENT APPLICATION NUMBER: US 09/029,042C
15 <141> CURRENT FILING DATE: 1998-05-15
17 <150> PRIOR APPLICATION NUMBER: PCT/KR96/00145
19 <151> PRIOR FILING DATE: 1996-08-23
21 <160> NUMBER OF SEQ ID NOS: 11
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OK

ERRORED SEQUENCES

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68 <210> SEQ ID NO: 2
70 <211> LENGTH: 1583
72 <212> TYPE: DNA
74 <213> ORGANISM: erythropoietin
76 <400> SEQUENCE: 2
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80   gtgacagccg agtcctggag aggtacctct tggaggccaa ggaggccgag 150
81   aatatcacgg tgagaccccct tcccagcac attccacaga actcacgctc 200
82   agggcttcag ggaactcctc ccagatccag gaacctggca cttggtttgg 250
83   ggtggagttg ggaagctaga cactgccccc ctacataaga ataagtctgg 300
84   tggccccaaa ccatacctgg aaactaggca aggagcaaag ccagcagatc 350
85   ctacgcctgt ggccagggcc agagccttca gggaccctg actccccggg 400
86   ctgtgtgcat ttcagacggg ctgtgctgaa cactgcagct tgaatgagaa 450
87   tatcactgtc ccagacacca aagttaattt ctatgcctgg aagaggatgg 500
88   aggtgagttc cttttttttt ttttttcctt tctttggag aatctcattt 550
89   gcgagcctga ttttggatga aagggagaat gatcgaggga aaggtaaaat 600
90   ggagcagcag agatgaggct gcctgggcgc agaggctcac gtctataatc 650
91   ccaggctgag atggccgaga tgggagaatt gcttgagccc tggaggttca 700
92   gaccaacctg ggcagcatag tgagatcccc catctctaca aacatttaaa 750
93   aaaattagtc aggtgaagtg gtgcatggtg gtagtcccag atatttggaa 800
94   ggctgaggcg ggaggatcgc ttgagcccag gaatttgagg ctgcagtgag 850
95   ctgtgatcac accactgcac tccagcctca gtgacagagt gaggccctgt 900
96   ctcaaaaaag aaaagaaaaa agaaaaataa tgagggctgt atggaatacg 950
97   ttcattattc attcactcac tcactcactc attcattcat tcattcattc 1000
98   aacatgtctt attgcatacc ttctgtttgc tcagcttggt gcttgagagt 1050
99   ccactccctg taggtcgggc agcaggccgt agaagtctgg cagggcctgg 1100
100   cctgctgtc ggaagctgtc ctgcgggcc aggccctgtt ggtcaactct 1150
101   tcccagccgt gggagcccct gcagctgcat gtggataaag ccgtcagtgg 1200
102   ccttcgcagc ctcaccactc tgcttcgggc tctgggagcc caggtgagta 1250
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1533 shown (p.2)

RAW SEQUENCE LISTING
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Input Set : N:\paola\PTO.txt
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   104  gctaaggagt acaggaactg tccgtattcc ttcccttttt gtggcactgc 1350
   105  agcgacctcc tgttttctcc ttggcagaag gaagccatct ccccttccaga 1400
   106  tgcggccttca gctgctccac tccgaacaat cactgctgac actttccgca 1450
   107  aactctttcg agtctactcc aattttctcc ggggaaagct gaagctgtac 1500
E--> 108  acaggggagg cctgcaggac aggggacaga tga                  1583
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   251 <212> TYPE: DNA
   253 <213> ORGANISM: erythropoietin
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   259  gtgacagccg agtcctggag aggtacctct tggaggccaa ggaggccgag 150
   260  aatatcacgg tgagacccct tccccagcac attccacaga actcacgctc 200
   261  agggcttcag gggaactcct cccaggatcc aggaacctgg cacttggttt 250
   262  gggtggagt tgggaaagcta gacactgccc ccctacataa gaataagtct 300
   263  ggtggccccca aaccatacct ggaaactagg caaggagcaa agccagcaga 350
   264  tcctacggcc tgtggcccag ggccagagcc ttcagggacc cttgactccc 400
   265  cgggctgtgt gcattccaga cgggctgtgc tgaacactgc agcttgaatg 450
   266  agaatatcac tgtcccagac accaaagtta atttctatgc ctggaagagg 500
   267  atggaggtga gttcctttrt tttttttttt ccttictttt ggagaatctc 550
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   269  aaatggagca gcagagatga ggctgcctgg gcgcagaggc tccagtctat 650
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   271  ttcagaccaa cctaggcagc ctagtgagat ccccccatct tacaaacatt 750
   272  taaaaaaatt agtcaggtga agtggtgcat ggtggtagtc ccagatattt 800
   273  ggaaggctga ggcgggagga tcgcttgagc ccaggaattt gaggctgcag 850
   274  tgagctgtga tcacaccact gcactccagc ctcagtgaca gagtgaggcc 900
   275  ctgtctcaaa aaagaaaaga aaaaagaaaa attatgaggg ctgtatggaa 950
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   277  attcaacaag tcttattgca tacctttctgt ttgctcaact tggtgcttgg 1050
E--> 278  ggctgctgag gggcaggagg gagagggtga catgggttca ctgactccca 1100
   279  gagtccactc cctgtaggtc gggcagcagg ccgtagaagt ctggcagggc 1150
   280  ctggccctgc tgtcggaagc tgtcctgcgg ggccaggccc tgttggtcaa 1200
   281  ctcttcccag ccgtgggagc ccctgcagct gcatgtggat aaagccgtca 1250
   282  gtggccttcg cagcctcacc actctgcttc gggctctggg agcccaggtg 1300
   283  agtaggagcg gacacttctg cttgcccttt ctgtaagaag gggagaaggg 1350
   284  tcttgctaag gagtacagga tctgtccgta ttccttccct ttctgtggca 1400
   285  ctgcagcgac cacctgtttt ctccttggca gaaggaagcc atctccccctc 1450
   286  cagatgcggc ctcagctgct ccactccgaa caatcactgc tgacactttc 1500
   287  cgcaaacttt tccgagtcta ctccaatttc ctccggggag agctgaagct 1550
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   409 <211> LENGTH: 193
   411 <212> TYPE: PRT
   413 <213> ORGANISM: erythropoietin gene
   415 <400> SEQUENCE: 10
   417   Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
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1583 1533

do not use "i" in the sequence itself, use "n" and explain in <220>-<223> section

next page

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Input Set : N:\paola\PTO.txt
Output Set: N:\CRF3\01112001\I029042C.raw

```
                1               5                  10                  15
Leu Ser Leu Pro Leu Gly Leu Pro Val Leu Gly Ala Pro Pro Arg Leu
            20                  25                  30
Ile Cys Asp Arg Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu
        35                  40                  45
Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu
    50                  55                  60
Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg
65                  70                  75                  80
Met Glu Val Gly Gln Gln Ala Val Glu Val Trp Gln Gly Leu Ala Leu
                85                  90                  95
Leu Ser Glu Ser Val Leu Arg Gly Gln Ala Leu Leu Val Asn Ser Ser
            100                 105                 110
Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly
        115                 120                 125
Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu Gly Ala Gln Lys Glu
    130                 135                 140
Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile
145                 150                 155                 160
Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu
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Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp
            180                 185                 190
Arg
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<210> SEQ ID NO: 11
<211> LENGTH: 193
<212> TYPE: PRT
<213> ORGANISM: erythropoietin gene

<400> SEQUENCE: 11

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Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
 1               5                  10                  15
Leu Ser Leu Pro Leu Gly Leu Pro Val Leu Gly Ala Pro Pro Arg Leu
            20                  25                  30
Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu
        35                  40                  45
Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu
    50                  55                  60
Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg
65                  70                  75                  80
Met Glu Val Gly Gln Gln Ala Val Glu Val Trp Gln Gly Leu Ala Leu
                85                  90                  95
Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu Leu Val Asn Ser Ser
            100                 105                 110
Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly
        115                 120                 125
Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu Gly Ala Gln Lys Glu
    130                 135                 140
Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile
145                 150                 155                 160
```

E--> 430 100 ~~100~~ 105 ~~105~~ 110 ~~110~~ ← misaligned numbers

E--> 432 115 120 125

E--> 434 130 135 140

E--> 436 145 150 155 160

E--> 438 165 170 175

E--> 440 180 185 190

next page

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/029,042C

DATE: 01/11/2001
TIME: 11:19:26

Input Set : N:\paola\PTO.txt
Output Set: N:\CRF3\01112001\I029042C.raw

```
475   Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu
476                   165                 170                 175
477   Arg Gly Glu Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp
478               180                 185                 190
479   Gly
E--> 480 (1)
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delete at end of file

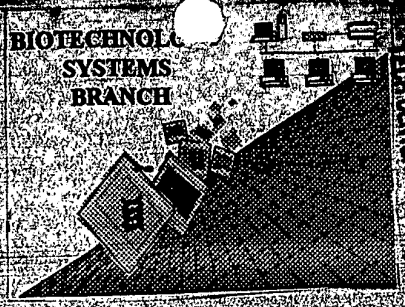
VERIFICATION SUMMARY
PATENT APPLICATION: US/09/029,042C

DATE: 01/11/2001
TIME: 11:19:27

Input Set : N:\paola\PTO.txt
Output Set: N:\CRF3\01112001\I029042C.raw

L:0 M:201 W: Mandatory field data missing, FILE REFERENCE
L:108 M:254 E: No. of Bases conflict, LENGTH:Input:1583 Counted:1533 SEQ:2
L:108 M:252 E: No. of Seq. differs, <211>LENGTH:Input:1583 Found:1533 SEQ:2
L:278 M:320 E: (1) Wrong Nucleic Acid Designator, NUMBER OF INVALID KEYS:1
L:430 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:10
M:332 Repeated in SeqNo=10
L:480 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:11

RAW SEQUENCE LISTING
ERROR REPORT



TECH CENTER 1600/2900

RECEIVED
MAR 26 2001

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/029,042C

Source: 1646

Date Processed by STIC: 1/11/2001

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:
1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY; or,
2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY.
FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.
PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)
PATENTIN 3.0 e-mail help: patin30help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW.

Checker Version 3.0

The Checker Version 3.0 application is a state-of the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 – 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.
Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO). Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

Checker Version 3.0 can be down loaded from the USPTO website at the following address:

http://www.uspto.gov/web/offices/pac/checker